

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PC-21005025	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/SE 2003/001444	International filing date (<i>day/month/year</i>) 16.09.2003	Priority date (<i>day/month/year</i>) 16.09.2002
International Patent Classification (IPC) or national classification and IPC B23K 35/04, B23K 35/40, B23K 9/24		
Applicant ESAB AB et al		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 4 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
 - a. ☐ (*sent to the applicant and to the International Bureau*) a total of _____ sheets, as follows:

☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - b. ☐ (*sent to the International Bureau only*) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:
- | | | |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

Date of submission of the demand 05.04.2004	Date of completion of this report 28.10.2004
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. +46 8 667 72 88	Authorized officer Lars Hennix/MP Telephone No. +46 8 782 25 00

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of:

- ☐ international search (under Rules 12.3 and 23.1(b))
☐ publication of the international application (under Rule 12.4)
☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☒ the international application as originally filed/furnished

☐ the description:

pages _____ as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☐ the claims:

pages _____ as originally filed/furnished

pages* _____ as amended (together with any statement) under Article 19

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☐ the drawings:

pages _____ as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (specify): _____

☐ any table(s) related to the sequence listing (specify): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (specify): _____

☐ any table(s) related to the sequence listing (specify): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-31</u>	YES
	Claims		NO
Inventive step (IS)	Claims	<u>1-31</u>	YES
	Claims		NO
Industrial applicability (IA)	Claims	<u>1-31</u>	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

The following documents were cited in the International Search Report:

D1: US6426483 A1
D2: US4471208 A1
D3: GB1481140 A1
D3: US1940573 A1

The invention according to claim 1 refers to a welding electrode for manual metal-arc welding. The electrode according to claim 1 comprises an electrode core with an ignition part comprising an ignition surface. The electrode is characterized in that the ignition part is provided with recesses which open into the longitudinal surface of the electrode core.

The invention according to claim 1 intends to solve the problem of providing a welding electrode with a reduced area section in the ignition part, thereby providing good ignition properties.

The invention according to claim 12 refers to an apparatus for the manufacturing of electrodes characterized in that it is provided with means for forming a slit in the end part of the electrodes and holding means in which the electrodes are collected prior to being moved to the slitting means.

The invention according to claim 12 solves the problem of providing an apparatus in which a manual metal-arc electrode with reduced area section in the ignition part can be manufactured.

.../...

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Box V

D1 refers to a wire-electrode for continuous metal arc welding. The wire is provided with indentations along its length. The indentations solve the problem of providing improved droplet transfer from the wire to the work piece in combination with a pulse welding process (col. 2, lines 15-45; col. 9, lines 10-59). Thus, not being directed towards ignition of manual welding electrodes, D1 has been reconsidered to be of no particular relevance in view of the invention defined in claim 1.

D2 refers to a welding electrode for TIG-welding. The tip of the electrode is provided with a slot, the purpose of the slot is to protect the electrode from being coated with metal vaporized from the surface of the weld pool (col. 1, lines 5-15; col. 1, lines 46-56). D2 does not refer to the ignition of metal arc electrodes for manual welding. Consequently, the document has been reconsidered to be of no particular relevance in view of the invention defined in claim 12.

Documents D3 and D4 further describe the prior art.

Consequently, the electrode according to claims 1-11 and the apparatus according to claims 12-31 are considered to be novel, to involve an inventive step and to be industrially applicable.